CASE OF ACUTE INTERMITTENT HYDRONEPHROSIS FROM VALVULAR STRICTURE OF THE URETER.

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BENJAMIN GOODMAN, aged twenty-five, tailor, entered the Sisters'-of-Charity Hospital on August 12, 1893, with the following history: He had for twelve years suffered from periodical attacks of pain in the right lumbar region without any known cause. The attacks came on about every two or three months and then lasted about a week. The pain was usually very severe, extending downwards into the thigh, scrotum and head of penis, and could be relieved only by hypodermics of morphia. The pain was ushered in by continual vomiting and general malaise, with fever and restlessness. He had noticed that the urine during the attacks was somewhat scanty (one pint in twenty-four hours) and voided with some difficulty. When the attack was over he passed urine freely and in greater quantity. The urine had never to his knowledge contained blood or pus, nor had he ever passed a concrement. Of late the attacks had become more frequent, and he scarcely recovered from one before another commenced. He had been treated by a number of physicians with alkalies, mineral waters, etc. His mother had died of phthisis; the rest of the family were healthy. By the objective examination nothing particular was discovered. He was tender from pressure in the right lumbar region, but no appreciable fulness was discovered.

The examination of urine showed specific gravity 1035, acid reaction, no albumin, sugar or bile. The color was reddish. Microscopically it contained numerous crystals of oxalate of lime and blood corpuscles, but no pus or casts. It is to be deplored that no cystoscopic examination was made, as it probably would have given important information in regard to the diagnosis. The patient had suffered

for so many years that he was anxious to have something done to relieve him of his continual misery.

The symptoms pointed to the right kidney as the seat of lesion and to a kidney stone, producing occlusion of the ureter as the probable cause.

I therefore advised an explorative nephrotomy, and performed it on August 14, 1893, by aid of the usual oblique incision. After

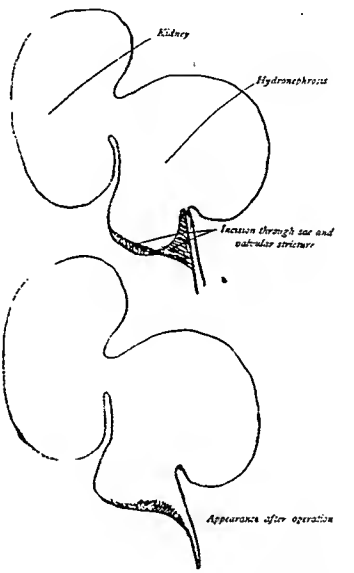

FIG. 1.—Acute intermittent hydronephrosis from valvular stricture of the ureter.

the kidney was exposed a fluctuating swelling was seen as large as an orange, below and to the inside of the kidney, containing a clear, watery fluid, and being a hydronephrosis. An incision an inch long was made in its lower end, and about half pint of fluid evacuated. The finger was introduced and the kidney explored for stone, but none found. By spreading the incision laterally the opening of the ureter could be seen plainly. It appeared as a papilla extending a quarter of an inch into the cavity. A flexible bougie, No. 14, French scale,

was introduced with ease into the bladder, showing the ureter to be permeable through the whole length. I could find no other cause for the recurrent hydronephrosis than this abnormal condition of the ureter. The kidney was not more movable than normally. I therefore enlarged the incision downward through the papilla and well into the healthy ureter, pulled the margins of the wound outward with fine hooks, and united the wound longitudinally with numerous fine silk sutures, taking in the outer two coats of the ureter and sack, and avoiding the mucous membrane. After the wound was sutured the appearance was more that of a funnel. (See illustrations.) The wound in the sack and ureter was protected with a meche of iodoform gauze for possible drainage, and the rest of the wound closed. He complained for three or four days after the operation of considerable tenderness in the lumbar region and had moderate fever. No discharge of urine occurred through the wound. The urine contained considerable blood and had to be drawn by catheter. The amount was—

17 ounces on the first day;
18 " " second day;
20 " " third day;
28 " " fourth day;
38 " " fifth day;
40 " " sixth day;

and thereafter about 40 ounces daily.

Under the use of

℞. Tinct. chlor. iron . . . . . qlt. 20.
Fl. ext. ergot . . . . . ℥ji.
Acid. gallici . . . . . gr. 10.
Glycerine . . . . . q. s. ad ℥ss.
D. every four hours.

the urine cleared up and became normal, all pain and tenderness disappeared, the wound healed, and on August 29, fifteen days after the operation, he was discharged feeling well. He has since been well, gained in flesh and had no attacks. I have so far not made a cystoscopic examination to satisfy myself beyond doubt that the function of the kidney is restored.

This case is of interest in more than one way. It proves, what otherwise is well known, that incised wounds of the ureter may heal as any other wound, if carefully sutured. Fenger,

of Chicago, has published a very similar case.[1] He remedied the defect by dividing the valve transversely and uniting the ends of the incision by suture. In a case of stricture lower down, he made a longitudinal incision and united it transversely, similar to the operation of Heinecke-Mikulicz for stenosis of the pylorus. I united the incision in my case by longitudinal suture, as there seemed to be a superabundance of tissue after the tip of the valve had been pulled outwards.

Fenger states that valvular stricture at the "pelvic orifice of the ureter is usually caused by lateral insertion of the ureter in a dilated pelvis."

Küster, in a similar case, but with another stricture lower down, resected the stricture and united the ureter with the pelvis of the kidney. The plastic operation, however, is, as Fenger states, easier of technique.

The spontaneous evacuation of the hydronephrosis was, perhaps, due to obliteration of the valve or papilla by pressure of the fluid, when the hydronephrosis had reached a certain degree.

The usual cause of intermittent hydronephrosis (according to Ferrier and Baudouin, who have collected eighty-three cases),[2] is a floating kidney, causing a kink in the ureter, and thus arresting the evacuation of urine. Most of the cases, they state, became eventually permanent by inflammatory changes, which form bands of adhesions and thus fasten the kidney in its displaced position. They advise early nephrorraphy, or else nephrectomy. Judging from the successful results of Fenger's and my own cases, nephrectomy can scarcely be indicated. It is more than possible that a valvular stricture may be the cause of the acute hydronephrosis, whether there be a floating kidney or not, and that it may be remedied by nothing more serious than a slight plastic operation.

[1] Chicago Medical Recorder, March, 1893.

[2] Annual of the Universal Medical Sciences, E 28.